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ABSTRACT

State and local government spending on public elementary and secondary education grew from $40.7 billion in 1970 to an estimated $256.3 billion in 1996, a more than 6-fold increase in 25 years. Even when adjusted for inflation and changes in enrollment, real per-pupil spending still increased 86 percent. This brief examines some of the underlying causes for the increase in education spending and discusses the outlook for the future. There are several factors responsible for the rapid growth in spending, including broadly expanded special and vocational education programs, increased teacher salaries, and increased equipment needs. Before exploring those factors, however, the brief describes how spending increased, especially relative to the size of the economy. The brief focuses on enrollment shifts, changes in spending, growth rates, and fiscal impacts. The data show that special education programs appear to have consumed a disproportionate share of new education resources and that education expenditures vary widely across states. The outlook for the future is continued but moderately slowing growth and a shift in enrollment pressure from elementary to secondary schools. Other issues that will affect education--special education, price increases, teacher retirements, higher education standards, a longer school year, capital needs, and technological advancement--will lead to higher costs for education, suggesting continued pressure on education budgets. A sidebar describes changing school district resource allocations in New York State. Contains 6 figures, 6 tables, and 23 endnotes. (LMI)

STATE FISCAL BRIEF

Center for the Study of the States
Nelson A. Rockefeller Institute of Government

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Education Spending Faces Demographic and Other Pressures

DAVID S. LIEBSCHUTZ AND DONALD J. BOYD

HIGHLIGHTS

- ❖ Public education is the largest component of state and local budgets, and it is growing rapidly. Real per pupil spending increased by 86% between 1970 and 1996.
- ❖ The "baby boomlet" is putting pressure on school districts, as they cope with overflowing classrooms. Between 1996 and 2006, enrollment is projected to grow by 5.8%.
- ❖ Recent studies suggest that special education programs have consumed a disproportionate share of new education resources. For example, a study of New York State school districts from 1980 to 1994 showed that much of the increase in real per pupil spending was for special education programs, especially in New York City.
- ❖ Education expenditures vary widely across states. Per-capita income is the single biggest indication of how much states spend on education.

TABLE OF CONTENTS

OVERVIEW

State and local government spending on public elementary and secondary education grew from $40.7 billion in 1970 to an estimated $256.3 billion in 1996, a more than six-fold increase in twenty-five years.[1] Even when adjusted for inflation and changes in enrollment, real per-pupil spending still increased 86 percent. This *State Fiscal Brief* examines some of the underlying causes for this massive increase in education spending and discusses the outlook for the future.

Spending on education has increased steadily since 1970, even during periods when enrollment declined. There are several factors explaining this rapid growth, including broadly expanded special and vocational education programs as well as increased teacher salaries and equipment needs (e.g., computers, science equipment). However, before exploring these factors, it is useful to understand how spending increased, especially relative to the size of the economy.

ENROLLMENT SHIFTS

As shown in Figure 1, public school enrollment reached an historical high in 1972 at 46 million students. It then declined steadily until 1985 when there were only 39 million students in public schools. Since 1985, public enrollment has been rising steadily and is now estimated to be just below the 1972 level (for the school year beginning in September 1996).[2] The U.S. Department of Education's National Center for Education Statistics (NCES) predicts enrollment will continue to rise, although more slowly, until at least 2006.[3]

What explains this dramatic shift in enrollment, and what implications does it have for states and localities? It can be traced to the so-called "baby boomlet," where the post-World War II baby boom generation had children of their own. It parallels the baby boom's 65 percent increase in enrollment between 1950 and 1964.[4] There are several implications of this increased enrollment for states and localities. Aside from the obviously increased costs of educating a greater number of students, there is the less obvious issue of the makeup of those students. For example, as children move from the primary to the secondary grades costs increase because of both smaller class sizes and more experienced—and thus more costly—faculty. Thus, even though the overall rate of enrollment growth may slow down in the coming decade, there will still be significant growth in the higher, more expensive grades, causing increased budget pressures on school districts. According to the NCES projections cited above, enrollment in grades 9 through 12 will grow over 15 percent from 1996 to 2006, while enrollment in the lower grades will grow only 2 percent. In addition, as will be discussed below, special education programs, which are significantly more expensive, have been growing more rapidly than regular education.

Regional Variations in Enrollment Shifts

Enrollment trends vary widely by region. The regions in the country with the fastest growing overall population—the Rocky Mountains, Southeast, Southwest and Far West—have also tended to have the highest enrollment growth as shown in Figure 2. For example, although enrollment declined 13% nationally from 1970 to 1986, enrollment in two regions—the Southwest and the Rocky Mountains—actually grew over the period, the Southwest by nearly 16 percent and the Rockies by nearly 10 percent. By contrast, the Great Lakes, Mid-Atlantic, New England and Plains regions all experienced more than 20 percent declines.

Furthermore, while national enrollment grew by 9% from 1986 to 1994, the Great Lakes, Mid-Atlantic, New England and Plains states continued to lag the national average, while the rapid rate of growth in the Western states accelerated (see Figure 3).

CHANGES IN SPENDING

From 1970 to 1996 spending on elementary and secondary education continued to increase even as the number of students declined. (See Figure 1.) Thus, spending per pupil increased at an even faster rate than total spending, from $816 in 1970 to $6,213 in 1996 or nearly an

FIGURE 1
TOTAL EXPENDITURES AND TOTAL ENROLLMENT IN PUBLIC K-12 EDUCATION

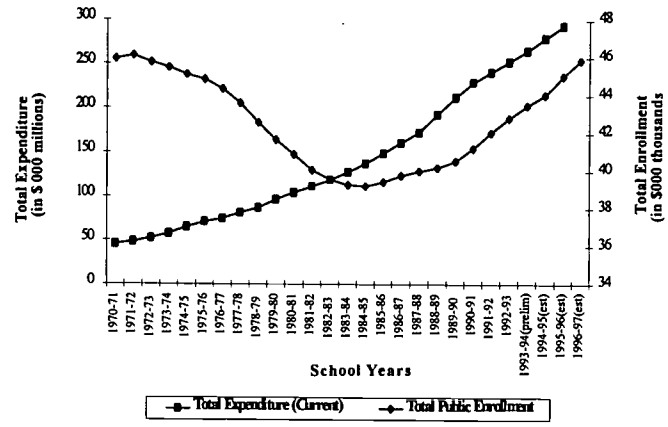


FIGURE 2
PUBLIC SCHOOL ENROLLMENT, 1970-86

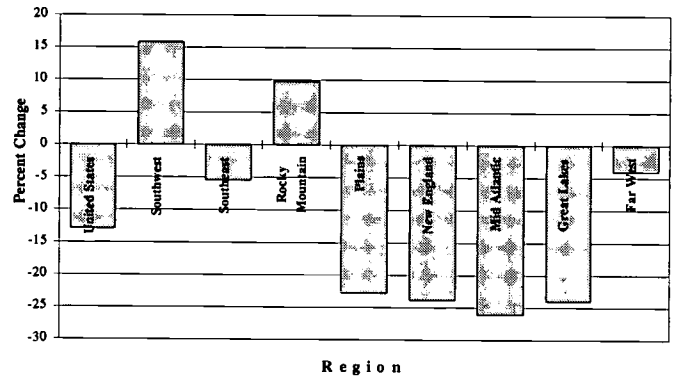
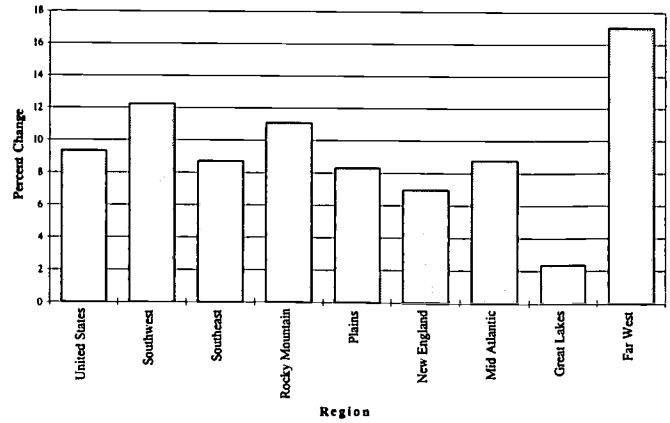


FIGURE 3
PUBLIC SCHOOL ENROLLMENT, 1986-94



eight-fold increase. Though the nominal increase is impressive, because some of it was due to inflation, it makes more sense to look at real growth in per pupil spending. Following the approach used by NCES, we adjust for changes in overall prices, using the Consumer Price Index.

As shown in Figure 4, from 1970 to 1996, inflation-adjusted spending per pupil grew 86 percent, from $3,158 to $6,213, though it did not increase steadily throughout the period. From 1970 to 1979, spending increased by a third, but then, in part due to the recession of the early 1980s, real spending was virtually flat until 1984. It then accelerated until 1990, but it has been nearly flat since then.

Regional Variations in Spending

Two ways to examine regional variations in education spending are to compare real spending per pupil, and to compare spending as a share of personal income. The former provides a rough indication of the resources that children receive; the latter provides an indication of how much of a state's resources is devoted to public elementary-secondary education. Although real spending per pupil has increased greatly since 1970, spending per $100 of personal income has fluctuated within a narrow band since 1970 ranging from $4.43 in 1970 to $4.23 in 1994.

Tables 1 and 2 show how each region and state fared on the two measures over the period between 1970 and 1994. Table 1 shows real current per pupil spending by state from 1970 to 1994 in 1993-94 dollars.[5] The Mid-Atlantic and New England states had the highest rates of spending per pupil, while the Rocky Mountain states, the Southeast and Southwest had the lowest. However, when spending is compared to personal income, the picture changes as shown in Table 2. For example, the Mid-Atlantic states were 40 percent above the national average in spending per pupil in 1994, but only 8 percent above average when spending was compared to personal income. New England also follows a similar pattern with spending per pupil 24 percent above average, but 4 percent below average relative to personal income. However, the Rocky Mountain states were 22 percent below average in spending per pupil in 1994, but 4 percent above average compared to personal income. The Southeast (16 percent below per pupil vs. 6 percent below the national average relative to income) and Southwest (17 percent below per pupil vs. 8 above relative to income) follow a similar pattern. Much of these differences stem from relative number of children in each of these regions (i.e., states with more children relative to the total population tend to have lower per pupil spending and higher spending relative to the size of the economy). For example, according to 1994 Census figures only 17 percent of the people in the Northeast were of school age (5 to 17), while 19 percent of Westerners fell into this age cohort.

GROWTH RATES

Changes in spending since 1970 have differed considerably from state to state. This section discusses several factors that have contributed to those variations.

Income differences. The single biggest factor that influences real per pupil spending seems to be per-capita income. Figure 5 shows the relationship between per-capita income in 1993 and spending per pupil in 1993-94. As the figure shows, the higher the per capita income the more likely it will be for a state to spend more on education. This is one of the main reasons why per pupil spending is high in the relatively wealthy Northeastern states and low in relatively poor Southeastern states. Yet, per capita income does not fully explain the level of spending nor do changes in income fully explain changes in spending. For example, real per pupil spending increased at approximately the same rate in Massachusetts as it did in West Virginia during the 1980s and yet real per capita income actually fell over 10 percent in West Virginia while it increased over 30 percent in Massachusetts.

Demographics. The number of school children in a state as a share of population also influences the resources devoted to education, but it does not have quite as strong a role as income. As shown in Figure 6, during the 1980s as enrollment decreased real per pupil spending tended to decrease. A state like Connecticut with a declining number of students and relatively low number of students as a percent of the general population (14% in 1994) tends, other things being equal, to have higher spending per pupil because it has fewer of them to educate. On the other hand, Utah is in the opposite situation, as the number of children has continued to grow rapidly, and thus with such a large school enrollment as a percent of the general population ratio (23%) it can only afford low per-pupil spending. However, its school spending effort is high relative to personal income, a sign of strong political support for schools. Finally, there were some states that had both high enrollment growth and high spending growth such as Florida and Georgia.

Historical and Political Differences. Certain political, geographic, and historical differences also help to explain the differences in education spending. Politically conservative states tend to have relatively low spending for most government programs, including education.[6] For example, southern states have a long-standing tradition of limited government and low expenditures. Thus, southern states have relatively low school spending even factoring in the low cost of living.[7]

Some political factors have also influenced the course of education spending. In the 1980s, many governors (for example, Bill Clinton of Arkansas, Lamar Alexander of Tennessee, and Richard Riley of South Carolina) made increases in education a political priority, and they convinced their legislatures to raise state taxes to increase school aid. In addition, in some states the business community played an active role in promoting the idea that education reform was vital for state economic development. During the 1970s and 1980s, many business leaders advocated education reform as a powerful economic development tool.[8] In particular, most

TABLE 1
REAL CURRENT PER PUPIL SPENDING, 1970 TO 1994
(1994 DOLLARS)

	School Year				Index	% Change		
	1969-70	1979-80	1989-90	1993-94	1993-94	1970-80	1980-90	1990-94
United States	**$ 3,158**	**$ 4,279**	**$ 5,725**	**$ 5,767**	**100**	**35.5**	**33.8**	**0.7**
New England	**3,326**	**4,692**	**7,359**	**7,132**	**124**	**41.1**	**56.8**	**(3.1)**
Connecticut	3,682	4,558	8,920	8,473	147	23.8	95.7	(5.0)
Maine	2,680	3,434	6,187	6,069	105	28.1	80.2	(1.9)
Massachusetts	3,325	5,310	7,182	6,959	121	59.7	35.3	(3.1)
New Hampshire	2,799	3,608	6,108	5,723	99	28.9	69.3	(6.3)
Rhode Island	3,449	4,899	7,333	7,333	127	42.0	49.7	0.0
Vermont	3,124	3,761	7,170	6,600	114	20.4	90.6	(7.9)
Mid Atlantic	**4,232**	**5,717**	**8,380**	**8,090**	**140**	**35.1**	**46.6**	**(3.5)**
Delaware	3,484	5,389	6,678	6,621	115	54.7	23.9	(0.9)
Maryland	3,555	4,893	7,135	6,958	121	37.6	45.8	(2.5)
New Jersey	3,934	6,011	9,372	9,677	168	52.8	55.9	3.3
New York	5,135	6,521	9,283	9,175	159	27.0	42.4	(1.2)
Pennsylvania	3,413	4,774	7,172	6,983	121	39.9	50.2	(2.6)
Great Lakes	**3,222**	**4,433**	**5,939**	**6,149**	**107**	**37.6**	**34.0**	**3.5**
Illinois	3,520	4,872	5,893	5,893	102	38.4	21.0	0.0
Indiana	2,818	3,545	5,239	5,630	98	25.8	47.8	7.5
Michigan	3,499	4,973	6,387	6,658	115	42.1	28.4	4.2
Ohio	2,826	3,907	5,809	5,971	104	38.3	48.7	2.8
Wisconsin	3,417	4,665	6,361	6,717	116	36.5	36.4	5.6
Plains	**3,060**	**4,076**	**5,330**	**5,384**	**93**	**33.2**	**30.8**	**1.0**
Iowa	3,267	4,382	5,128	5,288	92	34.1	17.0	3.1
Kansas	2,984	4,093	5,472	5,659	98	37.2	33.7	3.4
Minnesota	3,498	4,495	5,724	5,720	99	28.5	27.3	(0.0)
Missouri	2,743	3,647	5,190	5,114	89	33.0	42.3	(1.5)
Nebraska	2,850	4,049	5,576	5,651	98	42.1	37.7	1.3
North Dakota	2,669	3,617	4,824	4,674	81	35.5	33.4	(3.1)
South Dakota	2,670	3,593	4,296	4,586	80	34.6	19.6	6.8
Southeast	**2,396**	**3,301**	**4,749**	**4,827**	**84**	**37.7**	**43.9**	**1.6**
Alabama	2,106	3,036	3,831	4,037	70	44.2	26.2	5.4
Arkansas	2,197	2,965	4,013	4,280	74	35.0	35.3	6.7
Florida	2,835	3,558	5,755	5,516	96	25.5	61.7	(4.2)
Georgia	2,276	3,061	4,923	4,915	85	34.5	60.8	(0.2)
Kentucky	2,110	3,204	4,313	5,107	89	51.8	34.6	18.4
Louisiana	2,508	3,375	4,439	4,519	78	34.6	31.5	1.8
Mississippi	1,939	3,134	3,562	3,660	63	61.6	13.7	2.8
North Carolina	2,370	3,304	4,878	4,894	85	39.4	47.6	0.3
South Carolina	2,371	3,300	4,700	4,761	83	39.2	42.4	1.3
Tennessee	2,191	3,080	4,219	4,149	72	40.6	37.0	(1.7)
Virginia	2,740	3,710	5,311	5,109	89	35.4	43.2	(3.8)
West Virginia	2,593	3,617	5,021	5,713	99	39.5	38.8	13.8
Southwest	**2,466**	**3,632**	**4,622**	**4,795**	**83**	**47.2**	**27.3**	**3.8**
Arizona	2,787	3,712	4,667	4,611	80	33.2	25.7	(1.2)
New Mexico	2,737	3,830	4,047	4,261	74	39.9	5.7	5.3
Oklahoma	2,340	3,628	4,039	4,697	81	55.0	11.3	16.3
Texas	2,416	3,608	4,780	4,898	85	49.3	32.5	2.5
Rocky Mountain	**2,732**	**4,001**	**4,536**	**4,518**	**78**	**46.4**	**13.4**	**(0.4)**
Colorado	2,856	4,560	5,436	5,097	88	59.7	19.2	(6.2)
Idaho	2,335	3,125	3,544	3,844	67	33.8	13.4	8.5
Montana	3,026	4,664	5,454	5,598	97	54.1	16.9	2.6
Utah	2,424	3,120	3,183	3,439	60	28.7	2.0	8.0
Wyoming	3,313	4,759	6,423	5,899	102	43.6	35.0	(8.2)
Far West	**3,398**	**4,457**	**5,235**	**5,204**	**90**	**31.2**	**17.5**	**(0.6)**
Alaska	4,345	8,904	9,709	8,882	154	104.9	9.0	(8.5)
California	3,357	4,271	5,056	4,921	85	27.2	18.4	(2.7)
Hawaii	3,253	4,373	5,123	5,879	102	34.4	17.2	14.8
Nevada	2,978	3,933	4,741	5,049	88	32.1	20.5	6.5
Oregon	3,579	5,070	6,304	6,263	109	41.7	24.3	(0.7)
Washington	3,543	4,837	5,415	5,751	100	36.5	11.9	6.2

Note: Number of pupils is average daily attendance.
Figures were adjusted by the Consumer Price Index.
Source: National Center for Education Statistics, *Digest of Education Statistics, 1996*, Table 164, pages 81-2, and Table 43, p.68.

TABLE 2
CURRENT EDUCATION SPENDING PER $100 OF PERSONAL INCOME, 1970 TO 1994

	School Year				Index	%Change		
	1969-70	1979-80	1989-90	1993-94	1993-94	1970-80	1980-90	1990-94
United States	**$4.43**	**$4.26**	**$4.19**	**$4.23**	**100**	**(3.9)**	**(1.6)**	**0.9**
New England	**3.98**	**4.38**	**3.88**	**4.08**	**96**	**9.9**	**(11.3)**	**5.0**
Connecticut	4.05	3.67	4.01	4.14	98	(9.3)	9.2	3.3
Maine	5.00	4.65	5.17	5.26	124	(7.1)	11.2	1.8
Massachusetts	3.75	4.83	3.50	3.70	87	28.6	(27.5)	5.6
New Hampshire	3.72	3.71	3.62	3.94	93	(0.1)	(2.4)	8.8
Rhode Island	4.05	4.44	4.10	4.55	108	9.5	(7.6)	11.0
Vermont	5.34	4.83	5.70	5.74	136	(9.5)	17.8	0.7
Mid Atlantic	**4.59**	**4.71**	**4.40**	**4.58**	**108**	**2.7**	**(6.6)**	**4.2**
Delaware	4.54	4.79	3.78	3.84	91	5.6	(21.1)	1.6
Maryland	4.46	4.34	3.79	3.97	94	(2.6)	(12.7)	4.8
New Jersey	4.18	4.75	4.34	4.82	114	13.8	(8.6)	10.9
New York	4.94	5.06	4.61	4.82	114	2.4	(8.8)	4.6
Pennsylvania	4.27	4.25	4.38	4.30	102	(0.5)	3.1	(1.9)
Great Lakes	**4.31**	**4.28**	**4.30**	**4.39**	**104**	**(0.8)**	**0.5**	**2.0**
Illinois	3.93	3.94	3.67	3.76	89	0.3	(6.9)	2.4
Indiana	4.26	3.88	4.47	4.52	107	(8.7)	15.0	1.1
Michigan	5.03	5.22	4.82	4.94	117	3.8	(7.6)	2.3
Ohio	3.98	3.92	4.29	4.28	101	(1.3)	9.3	(0.2)
Wisconsin	4.81	4.51	4.80	5.08	120	(6.1)	6.5	5.7
Plains	**4.76**	**4.19**	**4.29**	**4.38**	**104**	**(12.1)**	**2.6**	**2.1**
Iowa	5.17	4.52	4.49	4.82	114	(12.5)	(0.6)	7.3
Kansas	4.58	3.86	4.45	4.54	107	(15.8)	15.2	2.0
Minnesota	5.54	4.78	4.35	4.42	104	(13.8)	(8.9)	1.6
Missouri	3.90	3.55	3.80	3.86	91	(8.8)	7.1	1.6
Nebraska	4.39	4.28	4.76	4.76	112	(2.6)	11.4	(0.2)
North Dakota	5.23	4.29	5.19	4.81	114	(17.9)	21.0	(7.4)
South Dakota	5.54	4.37	4.56	4.59	108	(21.1)	4.4	0.6
Southeast	**4.36**	**4.01**	**4.06**	**3.97**	**94**	**(8.0)**	**1.2**	**(2.1)**
Alabama	4.49	4.20	3.96	3.85	91	(6.6)	(5.7)	(2.7)
Arkansas	4.69	4.21	4.49	4.49	106	(10.3)	6.7	0.0
Florida	3.96	3.35	3.54	3.56	84	(15.5)	5.9	0.5
Georgia	4.16	3.90	4.18	4.16	98	(6.3)	7.3	(0.6)
Kentucky	3.76	3.90	4.01	4.53	107	3.8	2.8	13.0
Louisiana	4.81	4.07	4.85	4.49	106	(15.4)	19.1	(7.4)
Mississippi	4.98	4.71	4.77	4.40	104	(5.4)	1.4	(7.8)
North Carolina	4.44	4.43	4.13	3.86	91	(0.4)	(6.7)	(6.4)
South Carolina	5.11	4.68	4.75	4.49	106	(8.4)	1.5	(5.6)
Tennessee	4.11	3.91	3.73	3.42	81	(5.0)	(4.6)	(8.3)
Virginia	4.31	4.03	3.88	3.80	90	(6.6)	(3.8)	(1.9)
West Virginia	5.13	4.77	5.54	5.63	133	(7.0)	16.1	1.5
Southwest	**4.27**	**4.18**	**4.56**	**4.55**	**108**	**(2.1)**	**9.3**	**(0.2)**
Arizona	4.69	4.31	3.94	3.99	94	(8.1)	(8.6)	1.4
New Mexico	6.26	5.40	5.00	4.96	117	(13.7)	(7.4)	(0.8)
Oklahoma	4.19	4.25	4.13	4.74	112	1.3	(2.8)	14.7
Texas	4.06	4.05	4.74	4.61	109	(0.4)	17.1	**(2.7)**
Rocky Mountain	**5.02**	**4.77**	**4.69**	**4.40**	**104**	**(4.9)**	**(1.7)**	**(6.2)**
Colorado	4.60	4.59	4.15	3.77	89	(0.1)	(9.7)	(9.2)
Idaho	4.52	4.36	4.43	4.43	105	(3.4)	1.5	0.2
Montana	5.67	5.65	5.65	5.55	131	(0.4)	(0.0)	(1.8)
Utah	5.64	4.94	5.01	4.95	117	(12.4)	1.4	(1.1)
Wyoming	5.96	4.89	7.22	6.06	143	(17.9)	47.6	**(16.0)**
Far West	**4.48**	**3.96**	**3.82**	**3.81**	**90**	**(11.6)**	**(3.4)**	**(0.3)**
Alaska	5.92	7.57	7.59	7.35	174	27.8	0.3	(3.2)
California	4.30	3.72	3.65	3.60	85	(13.5)	(1.8)	(1.3)
Hawaii	4.24	3.85	3.33	3.63	86	(9.2)	(13.7)	9.1
Nevada	4.06	3.49	3.30	3.55	84	(13.9)	(5.6)	7.6
Oregon	5.34	4.75	5.03	4.82	114	(11.0)	5.9	(4.2)
Washington	5.12	4.63	4.11	4.23	100	(9.6)	(11.2)	2.7

Sources: Education Expenditure Data-National Center for Education Statistics, *Digest of Education Statistics, 1996,* Table 159, pp. 73-74. Personal Income Data-U.S. Department of Commerce as of October 1996.

FIGURE 4
REAL CURRENT SPENDING PER PUPIL, 1970 TO 1996 (1995-96 DOLLARS)

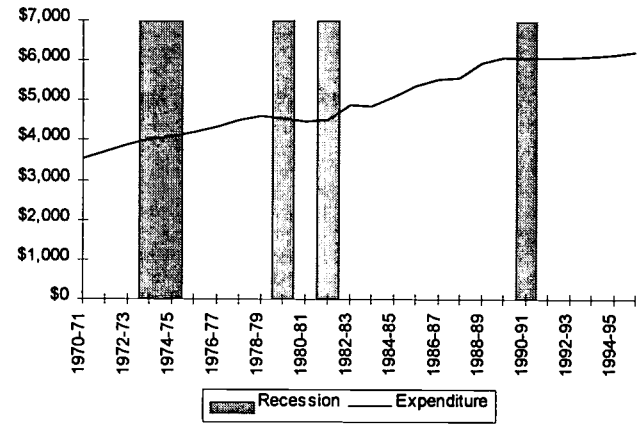


FIGURE 5
SPENDING PER PUPIL VS. PER CAPITA INCOME, 1993-94

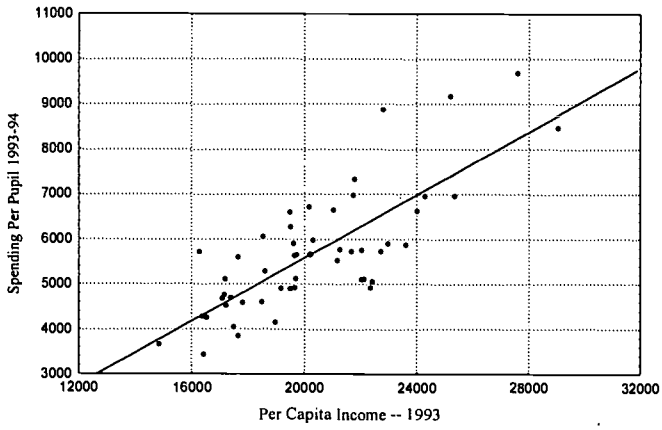
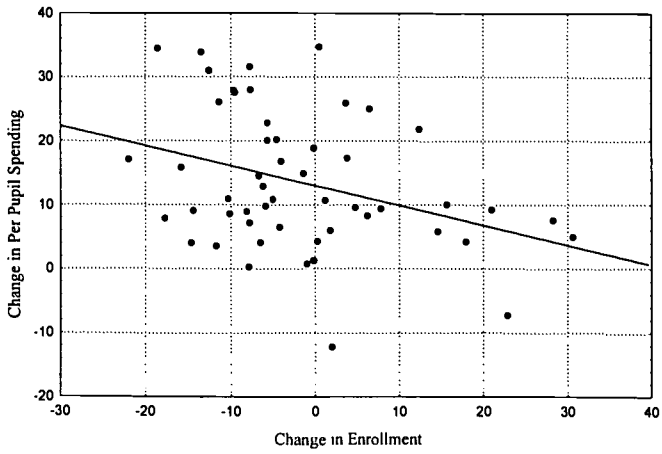


FIGURE 6
ENROLLMENT VS. PER PUPIL SPENDING DURING THE 1980S



of the states that raised taxes for schools in the 1980s had relatively low school spending at the time. Their subsequent spending increases has been viewed as an attempt to catch up with spending levels in other states.[9]

Why Did Spending Increase?

As shown above, the cost of educating children in the public schools has risen significantly in real terms in the last twenty five years. Did children benefit equally from spending changes, or did some services or activities receive more of the increase than others? Several analysts have explored this issue.

In *Where's the Money Gone*, Richard Rothstein looked at nine representative school districts across the country to see how spending has changed from 1967 to 1991.[10] Rothstein found that in these nine districts, while real spending on regular education programs (classroom teaching, libraries, textbooks, etc.) declined from 80 percent of total school budgets in 1967 to 59 percent in 1991, special education programs increased nearly fivefold (3.7 percent to 17 percent), attendance, counseling, dropout prevention, alternative education programs nearly doubled (2.1 percent to 4.1 percent), and food services more than doubled (2.0 percent to 4.1 percent).[11] In addition, there were several programs, such as vocational education, bilingual education, and desegregation that made up over 6 percent of total budgets in these districts in 1991 while they were less than 1.5 percent in 1967 (if they existed at all).[12] Although these conclusions cannot be generalized to all the school districts in the country, they highlight some trends that do exist, namely that the so-called regular education programs have had to compete with more and more specialized programs, driving up the cost of education.

In addition, although spending on regular education did not grow as fast as other programs, its cost had increased as student-teacher ratios have dropped and as the experience and, therefore, salaries of teachers have increased. Rothstein found that in his nine district survey, the cost of regular education went up over 28 percent in real dollars from 1967 to 1991.[13]

Special Education

Education services for the physically, mentally or emotional disabled fall into the broad category of special education. The 1975 Education for All Handicapped Children Act mandated the expansion of special education curriculum as did other state and local laws.[14] This has resulted in much higher costs across the country due to the large growth in the number of special education students. The U.S. Department of Education's Office of Special Education estimates that the total number of special education students went from 2.6 million in 1970 to 4.6 million in 1990 and from 5.9 percent to 11.4 percent of all students. Special education services are more expensive than regular education largely due to increased individual attention and resources necessary to serve this population. Most special education classes have smaller student-teacher ratios than regular education classes. For example, the average student teacher ratio nationwide was 17.4 in 1993, while for all disabled students it was 16.1.[15] In addition, the trend has been for the

special education ratio to decline faster than regular teaching even as the number of special education students has increased.

In the box on page 10, Professors Hamp Lankford and Jim Wyckoff of the State University of New York at Albany look at shifts in education resources in New York City and in the rest of New York State. They conclude that special education has consumed a disproportionate share of new education in resources in New York State, and that real spending per special-education pupil has grown much more rapidly than spending per non-special-education pupil.

Other Educational Services

In the nine representative districts studied in *Where's the Money Gone?*, spending on other non-traditional programs besides special education such as food service; attendance, counseling, dropout education, and alternative education; vocational education; desegregation; and bilingual education has increased significantly. As with special education, these programs often require more individual attention to students (e.g., counseling and vocational programs) or more specialized training on the part of the faculty (e.g., bilingual education). Furthermore, since many of these programs did not exist or were much smaller parts of school budgets in 1970, they have also put increased pressure on school budgets.

FISCAL IMPACTS

Budget Impact for States

Although spending on elementary and secondary education continues to be the single largest item in most state budgets, in recent years it has faced increasing competition from other programs. During a period of declining enrollment, states may have had more flexibility to allocate resources, but with enrollment predicted to continue to grow for at least ten more years, states will be faced with a dilemma of how to provide funding for more students while at the same time addressing the needs of the poor and the elderly.

Table 3 shows how state tax revenues have been allocated among major programs from 1970 to 1994. Although spending on elementary and secondary education as a proportion of state tax revenues has remained essentially flat over the period, other programs have not. For example, State spending for corrections and Medicaid has risen sharply as a proportion of state tax revenue, while state tax support of highway programs, welfare, and higher education has dropped. [16]

State spending on welfare recently has begun to decline, and Medicaid growth has slowed dramatically, so that education may consume a growing share of state expenditures in coming years.

Looming Construction Costs

One of the most immediate questions that arise from the recent boom in enrollment is where to place these new students. With a record number of students enrolled in public and private schools and with nearly three million more ed over the next decade, school construction and renovation is desperately needed. Over the last few years however, almost a fourth of all tax increases or bond proposals that would have provided such construction and renovation have not been supported by voters at the polls. Over the last five years K-12 public school construction and renovation spending has been between $10 and $11 billion annually.[17] However, new pressures and considerations may push that figure even higher. New teaching methods are emphasizing small group work. Modern physical education and library facilities are needed. Incorporating new technologies (the Internet, CD-ROMs, televisions) directly into everyday school instruction is seen as essential for teaching today's students. New building code regulations must be met. There are even pressures to incorporate whole community needs into renovation plans. These pressures and considerations require larger, more flexible school facilities. This translates into higher construction and renovation costs.[18]

Due to lack of voter support, some districts have been forced to institute stop-gap solutions such as portable classrooms, double sessions, and year-round schedules to deal with overcrowding. Other districts are taking out loans from underwriters, which do not require voter approval, to pay for needed construction and renovation costs.[19]

Property Tax Implications

Prior to World War II, most funding for schools was done locally, largely through the local property tax.[20] However, from 1940, when 30 percent of total school revenues came from state sources, until the mid-1980's, when nearly half of total school revenues came from state sources, state aid increased steadily. This allowed school districts to increase the size of their budgets without actually absorbing the full cost of the increased spending. Since the mid-1980s states have reduced their share of education funding to pay for other programs. Thus, localities have needed to increase their own-source revenues to pay for the expanded programming and increased enrollment. Between 1987 and 1994 local funding of education increased approximately 79 percent as compared with a 49 percent increase in state funding.[21] The local property tax has once again begun to increase after declining in the 1970s.

CONCLUSIONS & OUTLOOK FOR THE FUTURE

Though it is impossible to predict the future of school funding with any accuracy, there are certain things likely to happen based on current trends. It seems likely that there will be continued albeit moderately slowing growth as the baby boomlet continues but at a slower pace. The enrollment pressure will shift from elementary to secondary schools as the baby boomlet children move through school. This in turn will put further pressure on school districts which will need to hire more teachers at higher salaries, as there are generally fewer students per teacher in secondary school and these teachers tend to be paid more on average than their elementary counterparts.

Other issues that will affect the future of school funding include:

- Special Education -- will expensive special education

TABLE 3
STATE SPENDING FOR MAJOR PROGRAMS AS A PROPORTION OF STATE TAX REVENUE
(EXCLUDING SPENDING FINANCED BY FEDERAL AID AND REVENUE FROM CHARGES), 1970-94

Year	K-12 Education	Higher Education	Net Vendor Payments for Medical Care	Net Other Welfare	Corrections	Net Health & Hospitals	Net Highway	Miscellaneous
1970	32.8	13.0	3.0	8.3	2.3	8.3	17.3	15.0
1971	33.7	13.4	3.6	9.4	2.4	8.9	17.7	10.8
1972	32.4	12.9	3.3	8.3	2.3	8.7	16.0	16.2
1973	31.3	12.5	3.4	8.4	2.3	8.0	13.8	20.3
1974	32.7	13.2	4.1	8.3	2.4	8.4	13.9	16.9
1975	34.3	14.1	5.2	8.9	2.7	9.1	14.0	11.6
1976	34.3	14.3	5.3	9.0	2.8	8.7	12.1	13.5
1977	32.6	13.8	5.4	8.6	2.9	8.6	9.9	18.3
1978	32.1	13.7	5.6	8.3	2.9	8.2	9.7	19.4
1979	33.2	13.7	5.5	7.7	3.0	8.4	10.4	18.0
1980	35.0	14.0	6.1	8.1	3.2	8.8	10.9	13.8
1981	34.3	14.0	6.5	8.6	3.4	9.3	9.8	14.1
1982	33.6	14.1	6.4	8.2	3.6	9.3	9.5	15.3
1983	33.5	14.2	6.7	7.6	3.9	9.2	9.3	15.5
1984	31.3	13.2	6.8	7.1	3.9	8.1	8.6	21.0
1985	32.1	13.3	6.4	6.9	4.3	8.5	8.7	19.9
1986	33.3	13.4	6.5	7.0	4.7	8.9	9.1	17.0
1987	33.0	13.0	6.6	6.9	4.7	8.8	9.4	17.5
1988	32.9	13.0	7.0	6.8	5.0	8.8	9.4	17.0
1989	33.0	12.9	7.4	6.9	5.3	8.9	9.1	16.5
1990	33.5	13.0	8.2	6.9	5.7	9.2	9.2	14.1
1991	34.8	12.8	9.6	7.3	6.2	9.3	9.7	10.4
1992	34.0	12.2	11.9	8.0	6.1	8.7	9.6	9.5
1993	32.7	11.3	11.4	7.5	5.9	8.8	9.0	13.5
1994	31.5	11.0	12.2	7.8	6.2	8.8	8.8	13.7

Sources: U.S. Census Bureau, *Government Finances in {various years};* National Education Association, *Estimates of School Statistics {various years}*; and State Higher Education Executive Officers, *State Higher Education Appropriations {various years}*.

programs continue to grow rapidly, crowding out growth in other teaching programs?

- Price increases -- will education costs continue to grow more rapidly than prices in general?
- Teacher retirements--as older, more highly paid teachers retire, will they be replaced with younger, less expensive teachers, saving school districts money?
- Impact of higher education standards, longer school year, capital needs and technological enhancements—how will all of these issues affect the bottom line cost of educating children?

Most of these factors will lead to higher costs, suggesting continued pressure on education budgets in the years to come.

About the Authors and the Center for the Study of the States

David S. Liebschutz is the associate director of the Center. Donald J. Boyd is the director of the Center. Two of the Center's graduate assistants, Aysegul Kocer and Jeff Schieder, helped with this report. The Center is part of the Nelson A. Rockefeller Institute of Government, the public policy research arm of the State University of New York. Established in May 1990, the Center is a leading authority on developments in state finances and programs. Research for this report was funded by a grant from the Ford Foundation. The Center is located at 411 State Street, Albany, New York 12203-1003, phone (518) 443-5285, fax (518) 443-5274, e-mail: santosr@rockinst.org. For further information on this or other Center reports, contact the Center's administrative assistant, Rosann Santos.

Changing School District Resource Allocations in New York State: 1979-80 to 1993-94[22]

Hamp Lankford and Jim Wyckoff
University at Albany, State University of New York

Over the last fourteen years, New York State and its school districts have allocated substantial resources to the education of public primary and secondary students. During the 1993-94 school year, New York school districts spent $14.5 billion more than they had in 1979-80, a real per pupil increase of more than 50 percent. Where did this money go? What implications does this expenditure pattern have on future issues confronting school districts?

Examining the allocation of expenditures raises a number of interesting policy issues. We focus in detail on special education and general education spending changes. Our method for uncovering emerging expenditure priorities in schools is to examine how increases in real expenditures per pupil have been allocated across reasonably detailed budget categories. In particular, we are interested in the share of the total real per pupil increase that is allocated to each category. By comparing this share with the share of the total at the beginning of the period, we can observe changing expenditure priorities. To examine how expenditure allocations change under very different expenditure growth and enrollment scenarios, the analysis is presented separately for the two periods, 1980-89 and 1989-94. For similar reasons, the results for New York City and the remaining New York school districts are also presented separately.

In both New York City (Table 4) and the rest of the state (Table 5) spending on special-education accounts for a very large portion of all new expenditures.[23] In New York City spending on special-education teaching accounted for about 7 percent of all expenditures in 1980. However, it accounted for over 50 percent of the increased real expenditures per pupil during the 1980-89 period and over 40 percent of the new money in the 1989-94 period. Similarly, in districts in the rest of the state, special-education teaching was 4.5 percent of the 1980 expenditures per pupil, but accounted for 16 percent of the new money in the 1980-89 period and 60 percent of the increase in real per pupil expenditures during the latter period. In fact, as Table 6 shows, real spending per nonspecial education pupil between 1989 and 1993 was flat in New York City and actually declined in the rest of the state. Clearly special-education programs have become a priority in school districts across New York state over the last 14 years.

Meanwhile, the portion of increased expenditures allocated to general teaching is substantially smaller than the 1980 share. In New York City, general teaching claimed 54 percent of all expenditures in 1980, but received only 36 percent of increases in real per pupil spending during the 1980-89 period and actually experienced a minor decrease in the latter period. In districts in the rest of the state, resource allocation to general teaching slowed more gradually. Relative to a 53 percent share in 1980, the portion of the new money allocated in each period was 44 and 31 percent, respectively. The growth in special-education spending is startling.

Many school districts are faced with substantially higher expenditures and increasing resistance to both state and local tax-rate increases. In such an environment, increasing school enrollments generally and a more rapid increase in the population of costly special-education students, have put substantial pressure on resources available to nonspecial-education students. Eventually this pressure will likely lead to a more public debate over school district budget allocations.

TABLE 4

ALLOCATION OF EXPENDITURE INCREASE, 1980-89, 1989-94, NEW YORK CITY

Expenditure Categories	Share of 1980 Total (%)	Real per pupil expenditure increase ($)		Share of Change (%)		Share of 1994 Total (%)
		1980-89	1989-94	1980-89	1989-94	
Central Administration	2.2	$11	$-2	6.0	-1.8	2.7
Building Supervision	7.2	-19	-6	-10.3	-6.0	3.0
Curriculum Development	0.2	1	0	0.4	-0.3	0.2
Teaching, Regular	54.2	65	-1	35.9	-0.7	47.5
Teaching, Special Educ.	6.9	100	38	54.9	41.4	18.5
Pupil Personnel Services	2.7	10	-6	5.7	-6.7	2.8
Other Educational Support	1.0	-4	0	-2.2	0.4	0.3
Operations and Maintenance	9.6	21	-12	11.7	-12.6	8.8
Undistributed and Other	2.2	4	-8	2.0	-9.2	1.5
SUBTOTAL	**86.4**	**189**	**4**	**104.2**	**4.6**	**85.3**
Transportation	6.1	4	23	2.3	25.3	6.4
Insurance	0.0	0	0	0.0	0.0	0.0
Tuition	0.6	18	33	9.7	35.9	4.4
Debt	6.9	-29	31	-16.1	34.2	3.9
TOTAL	**100.0**	**$181**	**$92**	**100.0**	**100.0**	**100.0**

Table 5

Allocation of Expenditure Increase, 1980-89, 1989-94, All Other Major New York State Districts

Expenditure Categories	Share of 1980 Total (%)	Real per pupil expenditure increase ($)		Share of Change (%)		Share of 1994 Total (%)
		1980-89	1989-94	1980-89	1989-94	
Central Administration	3.2	$16	$1	4.4	1.0	3.5
Building Supervision	5.0	15	1	4.2	1.3	4.6
Curriculum Development	0.5	4	-2	1.1	-1.8	0.6
Teaching, Regular	53.3	155	26	44.4	30.7	49.3
Teaching, Special Educ.	4.5	57	51	16.3	60.5	10.9
Pupil Personnel Services	4.0	17	2	4.8	2.4	4.2
Other Educational Support	2.1	12	0	3.3	-0.2	2.4
Operations and Maintenance	10.8	23	-6	6.7	-6.9	8.7
Undistributed and Other	3.1	19	-3	5.3	-3.3	3.5
SUBTOTAL	**86.4**	**316**	**71**	**90.6**	**83.9**	**87.7**
Transportation	5.6	22	0	6.4	0.4	5.7
Insurance	0.6	4	1	1.2	1.8	0.9
Tuition	0.7	5	8	1.5	9.0	1.4
Debt	6.6	1	4	0.2	5.0	4.4
TOTAL	**100.0**	**$349**	**$85**	**100.0**	**100.0**	**100.0**

Table 6

Change in Spending for Special Education and Nonspecial Education Pupils, 1980-89, 1989-93, New York City and All Other Major New York State Districts

	% change in real spending per non-special-ed pupil	% change in real spending per special-ed pupil
New York City		
1980 to 1989	8.2	72.7
1989 to 1993	0.0	11.1
Rest of New York State		
1980 to 1989	43.6	50.3
1989 to 1993	-1.1	2.7

ENDNOTES

1. In this *State Fiscal Brief* all years mentioned, unless otherwise noted, are school years ending in the year mentioned. In this example, 1970 refers to the school year beginning in September of 1969.
2. If private school enrollment is counted, the number of children in school is actually slightly greater than it was in the 1971-72 school year.
3. U.S. Department of Education, National Center for Education Statistics, May 1996 unpublished data.
4. U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 1995*, Table 3, p12.
5. We use current or non-capital expenditures because they better reflect year-to-year variations in spending. Total expenditures include capital projects which tend to be more cyclical.
6. Wright, Erickson, and McIver show that public opinion liberalism and the composition of state public policies are closely related. See, "Public Opinion and Policy Liberalism in the American States," *American Journal of Political Science* 1987, p. 989.
7. For a further explanation of this concept, see Herman B. Leonard, *By Choice or By Chance* (Boston: Pioneer Institute for Public Policy).
8. According to Odden and Picus, business roundtable groups in several states issued education reports as did a variety of national business organizations. For a summary, see Allan R. Odden and Lawrence O. Picus, *School Finance: A Policy Perspective* (New York: McGraw-Hill, 1992).
9. Steven D. Gold, *How Much Do Schools Really Benefit When States Raise Taxes on Their Behalf?* (Washington, DC: National Education Association, 1995).
10. Rothstein, Richard, *Where's the Money Gone?* (Washington, D.C.: Economic Policy Institute, 1995).
11. Note: Rothstein's adjustment for "real" spending differs from the consumer price index used elsewhere in this report because he believes that it underrepresents the actual inflation for schools because schools are so heavily based on the services of teachers and productivity gains are harder to achieve. He instead uses what he calls a "net services" index (NSI) to adjust for inflation. See Rothstein, p.6.
12. Rothstein, pp. 32-33.
13. Rothstein, p. 37.
14. It should be noted that the Act did not cause the trend, it regulated it. *See* Rothstein, pp. 49-50.
15. Statistics from the U.S. Department of Education. While some mild forms of disability actually have higher student teacher ratios (e.g., reading and speech difficulties) it is generally the case that the more severe the disability, the lower the ratio.
16. Medicaid is represented by payments to hospitals and doctors for medical care; those payments account for most of Medicaid spending, but they do not include Medicaid spending at hospitals operated by governments. In this context, welfare spending refers to all poverty-related spending except Medicaid; it includes both cash assistance and social services. Both welfare and higher education have experienced significant decreases in spending as a proportion of state tax revenue. These decreases reflect the failure of welfare benefits to keep up with inflation and increasing reliance on tuition and fees rather than state appropriations to support public higher education.
17. Ibid.
18. "New Teaching Methods, Technology Add to Space Crunch," *Education Week,* October 2, 1996.
19. "Substandard Schools Lack Welcome Mat for Student Surge," *Education Week*, October 2, 1996.
20. For example, in 1920, over 83 percent of all school revenues came from local sources. In 1940, the number was 68 percent. See U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 1996*, Table 154, p68.
21. Ibid.
22. Most of the analysis in this brief is drawn from H. Lankford and J. Wyckoff "The Allocation of Resources in New York State School Districts: 1979-80 to 1993-94," *Cost Effectiveness in Education*, Robert Berne, ed., Albany, NY: New York State Board of Regents, 1996, pp. 45-62.
23. The category "teaching, special education" represents programs for children with disabilities, excluding tuition payments. This category does not reflect services provided to special-education students in general classrooms. Because it also excludes nonteaching services such as pupil personnel and transportation it represents an underestimate of the resources allocated to special-education students.

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